

GLOSSARY

Acre-foot: The volume of water required to cover one acre of land (43,560 square feet) to a depth of one foot; equivalent to 325,80 gallons.

Adjudicated water right: A water right for which the defining parameters required by law have been determined and decreed by a court of law.

Alluvium: Soil material, such as sand, silt, or clay that has been deposited on land surface by water.

Alteration: A term usually used in reference to *Idaho Code Title 42, Chapter 38*, the Stream Protection Act. An alteration is any activity that obstructs, diminishes, destroys, alters, modifies, relocates, or changes the natural existing shape of the stream channel within or below the mean high water mark. It includes removal of material from the stream channel and emplacement of material or structures in or across the stream channel where the material or structure has the potential to affect flow in the channel as determined by the director of the Idaho Department of Water Resources.

Anadromous: Fish species, such as salmon, that are born in fresh water, spend most of their adult life in the ocean, and return to fresh water to reproduce.

Appropriate or appropriation: To obtain the right to divert and use the public waters of the state of Idaho.

Beneficial use: The uses of water that can legally be protected by water rights.

Best management practices: State-of-the-art land and water use practices that are efficient, effective, practical, economical, and environmentally sound. The goal of best management practices is to minimize soil erosion.

Board: Idaho Water Resource Board.

Bull trout: The common name for *Salvelinus confluentus*, a char native to the Pacific Northwest and Canada.

Colluvium: Soil material, rock fragments, or both, moved by creep, slide, or local wash and deposited the base of steep slopes.

Commercial business: Non-manufacturing business.

Comprehensive State Water Plan: A plan adopted by the Idaho Water Resource Board and approved by the legislature pursuant to Section 42-1734A of the Idaho Code.

Confluence: The point at which one or more bodies of water flows into another.

Conservation: Actions taken to increase the efficiency of energy or water use, production, or distribution.

Consumptive use: The portion of the volume of water diverted under a water right that is transpired by vegetation, evaporated from soils, converted to non-recoverable water vapor, incorporated into products, or otherwise does not return to the waters of the state. Consumptive use does not include any water that falls as precipitation directly on the place of use unless it is captured, controlled, and used under an appurtenant water right (*Idaho Code § 42-202B(1)*).

Cubic feet per second: A unit of measure for the rate of discharge of water. One cubic foot per second is the rate of flow of one square foot of water that is flowing at mean velocity of one foot per second. It is equal to 448.8 gallons per minute, or 1.98 acre-foot per day.

Decree: A written decision by a court of law. Water right disputes are sometimes taken to court for resolution – the resultant description of the water rights in question are known as “decreed” water rights.

Domestic water use: The use of water as described in *Idaho Code § 42-111*. Domestic use can be for home, livestock, and for any other purposes in connection with a home, including irrigation of up to one-half acre of land. The total use cannot exceed 13,000 gallons per day. Domestic use can also be for other small uses such as commercial or business establishments, if the total diversion rate does not exceed 0.04 cubic feet per second and a diversion volume of 2,500 gallons per day.

Ecosystem: A complex system composed of a community of flora and fauna, taking into account the chemical and physical environment with which the system is interrelated.

Endangered species: Any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. The term is usually used in relation to the Endangered Species Act (see below).

Endangered Species Act: A federal statute that invokes protection for the species listed under the law (16 U.S.C. §1536). Animals and plants are designated as “endangered” or “threatened” by either the U.S. Fish and Wildlife Service or the U.S. National Marine Fisheries Service. There are other designations for “experimental populations.” Listed populations receive the highest protection possible, with penalties for taking, harming, or injuring an individual or its environment. Special procedures apply to government projects in areas where listed species may be present.

Evapotranspiration: The loss of moisture by evaporation from land and water surfaces and transpiration from plants.

Fishery enhancement structure: A structure deliberately placed within the waterway to improve fish habitat.

Floodplain: Land that may be submerged by floodwaters. The floodplain built up by stream deposition. The 100-year floodplain identifies the land in the floodplain subject to a one percent or greater chance of flooding in any given year.

Friable: Easily crumbled or pulverized.

Geothermal: The natural heat energy of the earth. In this plan, the term refers to water that is heated underground, and retains at least some of that heat at land surface or at the bottom of a well.

Ground water: All water under the surface of the ground whatever may be the geological structure in which it is standing or moving (*Idaho Code § 42-230*).

Habitat: The place or type of natural site where a plant or animal normally lives and grows.

Head: The elevation difference between surfaces of water.

High water mark: The line that separates aquatic vegetation from terrestrial vegetation. The line which the water impresses on the soil by covering it for sufficient periods of time to deprive the soil of its terrestrial vegetation and destroy its value for commonly accepted agricultural purposes (*Idaho Code § 42-3802*).

Hydropower project: Any development which uses a flow of water as a source of electrical or mechanical power, or which regulates the flow of water for the purpose of generating electrical or mechanical power. A hydropower project development includes all powerhouses, dams, water conduits, transmission lines, water impoundments, roads, and other appurtenant works and structures (*Idaho Code § 42-1731(5)*).

Idaho Batholith: The body of intrusive igneous (volcanic) rock in central Idaho about 250 miles long and a maximum of 100 miles wide. It is approximately 100 million years old.

Idaho Code: Idaho laws, as written by the state legislature and approved by the governor.

Idaho Water Resource Board: A constitutional water agency within the Idaho Department of Water Resources consisting of eight appointed members pursuant to the provisions of Article 15, Section 7 of the Idaho Constitution (*Idaho Code § 42-1732*).

Industrial business: A business that manufactures products.

Irrigation: The watering of cropland. Residential lawn and garden uses are not considered “irrigation” in the context of water rights issued by the state of Idaho.

Kilowatt: A unit of electric power equal to 1,000 watts, or about 0.746 horsepower.

Listed Species: Used in reference to animals and plants listed under the Endangered Species Act.

Mean high water mark: A water level corresponding to the natural or ordinary high water mark. The line which the water impresses on the soil by covering it for sufficient periods of time to deprive the soil of its terrestrial vegetation and destroy its value for commonly accepted agricultural purposes (*Idaho Code § 42-3802(h)*).

Megawatt: A unit of electrical power equal to 1,000,000 watts, or about 746 horsepower.

Minimum stream flow: A water right that retains water in the stream or river for wildlife habitat, recreation, navigation, and aesthetic beauty. Idaho Code defines this term as the minimum flow of water in cubic feet per second of time, or minimum lake level in feet above mean sea level, required to protect fish and wildlife habitat, aquatic life, recreation, scenic beauty, navigation, transportation, or water quality of a waterway in the public interest (*Idaho Code § 42-1502(f)*).

Municipal water use: Water for residential, commercial, or industrial use; for irrigation of parks and open spaces; or for related purposes. Municipal water use does not include use of water from geothermal sources for heating, which a municipal provider is entitled or obliged to supply to all those users within a service area, including those located outside the boundaries of a municipality served by a municipal provider (*Idaho Code § 42-202B(3)*).

Natural River: A designation made by the Idaho Water Resource Board. It defines a waterway which possesses outstanding fish and wildlife, recreation, geologic, or aesthetic values; which is free of substantial existing human-made impoundments, dams, or other structures; and of which the riparian areas are largely undeveloped although accessible in places by trails and roads (*Idaho Code § 42-1731(7)*).

Public interest (local): In regards to water appropriations, this encompasses the affairs of the people of the area directly affected by the proposed use (*Idaho Code § 42-203A(5)*).

Recreational dredge mining: Operation of vacuum or suction dredges and power sluice equipment in which the nozzle is 5 inches or less, and the equipment rated at 15 horsepower or less, and capable of moving 2 cubic yards per hour or less.

Recreational River: A designation made by the Idaho Water Resource Board. It defines a waterway which possesses outstanding fish and wildlife, recreation, geologic or aesthetic values, and which might include some human-made development within the waterway or within the riparian area of the waterway (*Idaho Code § 42-1731(9)*).

Rental pool: A market for exchange of stored water operated by a local committee. The committee is appointed by the Idaho Water Resource Board.

Riparian area: The area associated with aquatic (stream, river, or lake) habitats. The term is defined in Idaho Code for purposes associated with the Idaho Department of Water Resources and the Idaho Water Resource Board, as the area within one hundred (100) feet of the mean high water mark of a water way (*Idaho Code § 42-1731(10)*).

River basin: The total drainage or catchment area of a stream (i.e., the watershed).

River corridor: The area of varying width along both sides of a river or stream.

River reach: A continuous section of a river from one point to another; a stretch of the river.

Scrub vegetation: Vegetation dominated by shrubs, typically found at elevations below montane (mountain) vegetation.

State agency: Any board, commission, department, or executive agency of the state of Idaho.

Stream bed: A natural water course of perceptible extent with a definite bed and banks, which confines and conducts the water of a waterway which lies below and between the ordinary high water marks on either side of that waterway (*Idaho Code § 42-1731(12)*).

Threatened species: A species of plant or animal that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range, as determined by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

Total Maximum Daily Load (TMDL): The sum of all pollutants in a waterway. Pollutant levels established through TMDL standards must be at or below the level that the water body can assimilate without violating the state's water quality standards.

Unappropriated water: Water that is not subject to diversion and use under existing water rights (*Idaho Code § 42-1502(g)*).

Water right: The legal right, however acquired, to the use of water for beneficial purposes (*Idaho Code § 42-230(e)*).

Water right application: An application filed by any person, association, or corporation with the Idaho Department of Water Resources, intending to acquire the right to the beneficial use of the waters of any natural streams, springs, or seepage waters, lakes, or ground water, or other public waters of the state of Idaho (*Idaho Code § 42-202*).

Waterway: A river, stream, creek, lake, or spring, or a portion thereof.

Water table: The highest part of the soil or underlying rock material that is wholly saturated with water. On some places an upper, or perched, water table may be separated from a lower one by a dry zone.

Wetlands: Transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.

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APPENDIX A

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APPENDIX B

Preparers and Contributors

A special thanks to the citizens advisory group, who attended meetings, reviewed information, offered written and oral comments, and provided the Idaho Water Resource Board and their staff with invaluable information and feedback. Citizens advisory group participants are listed in Appendix A.

Preparation of this document and related materials relied upon the efforts from numerous IDWR personnel, Water Resource Board members, citizens advisory group members, outside agencies and organizations, and numerous individuals.

Idaho Water Resources Board
Joe Jordan, Chairman

Idaho Department of Water Resources
Karl Dreher, Director

Many private, non-profit, and governmental organizations also assisted in the development of this Comprehensive State Water Plan. The Water Resource Board and IDWR staff greatly appreciated the valuable contributions made by numerous individuals from the following organizations:

Adams County

National Marine Fisheries Service

Boise Cascade Corporation

Nez Perce Tribe

Idaho County

Trout Unlimited

Idaho Bureau of Disaster Services

U.S. Army Corps of Engineers

Idaho Department of Environmental Quality

***U.S. Bureau of Land Management –
Salmon Clearwater District***

Idaho Department of Fish and Game

***U.S. Department of Agriculture – Natural
Resources Conservation Service***

Idaho Farm Bureau Federation

U.S. Forest Service – Nez Perce National Forest

Idaho Rivers United

U.S. Forest Service – Payette National Forest

APPENDIX C

List of Agencies and Addresses

Agency/Web Site		Telephone Number
Columbia River Inter-Tribal Fish Commission http://www.critfc.org/	Main Office	(503) 238-0667
Idaho Department of Agriculture http://www.agri.state.id.us/	Main Office	(208) 332-8500
Idaho Soil Conservation Commission http://www.scc.state.id.us/	Main Office	(208) 332-8650
Idaho Department of Commerce http://www.idoc.state.id.us/	Main Office	(208) 334-2470
Idaho Department of Environmental Quality http://www2.state.id.us/deq/index.htm	Main Office	(208) 373-0502
	Boise Regional (Adams County)	(208) 373-0550
	Lewiston Regional (Idaho County)	(208) 799-4370
Idaho Department of Fish and Game http://www2.state.id.us/fishgame/fishgame.html	Main Office	(208) 334-5159
	McCall Regional Office	(208) 634-8137
Idaho Department of Water Resources http://www.idwr.state.id.us/	Main Office	(208) 327-7900
	Western Region	(208) 334-2190
Idaho Bureau of Disaster Services http://www2.state.id.us/bds/bds.html	Main Office	(208) 334-3460
	North Central Field Area Officer	(800) 632-8000 (208) 799-5127
Idaho OnePlan http://www.oneplan.state.id.us/Xdefault.htm		

Agency/Web Site		Telephone Number
Idaho Rural Partnership http://www.labor.state.id.us/irp/	Main Office	(208) 334-6113
Idaho Transportation Department http://www2.state.id.us/itd/itdhmpg.htm	Main Office District 2 (Lewiston) District 3 (Boise)	(208) 334-8000 (208) 799-4200 (208) 334-8301
Idaho Water Resource Board http://www.idwr.state.id.us/planpol/watplan/planning/iwrb_home.htm	Main Office	(208) 327-7900
Interior Columbia Basin Ecosystem Management Project http://www.icbemp.gov/	Main Office	(208) 334-1770
Local Government Environmental Assistance Network (LGEAN) http://lgean.org/		
National Marine Fisheries Service http://www.nmfs.noaa.gov/	Boise Office	(208) 378-5696
U.S. Bureau of Land Management http://www.id.blm.gov/	Cottonwood Field Office	(208) 962-3275
U.S. Corps of Engineers http://www.nww.usace.army.mil/	Walla Walla District Office	(509) 527-7700
U.S. Fish and Wildlife Service http://endangered.fws.gov/	Boise Field Office	(208) 378-5243
U.S. Forest Service Nez Perce National Forest http://www.fs.fed.us/r1/nezperce/ Payette National Forest, New Meadows Ranger District http://www.fs.fed.us/r4/payette/main.html Wallowa-Whitman National Forest, Hells Canyon National Recreation Area http://www.fs.fed.us/r6/w-w/hcnra.htm		(208) 983-1950 (208) 347-0300 (541) 426-4978

APPENDIX D

Water Right Decrees in the Little Salmon River Basin

IDWR Decree No.	Source	Parties	Date	IDWR Water Right Nos.	Notes
78A	Big Creek and Tributaries	Schieler vs. Wyman et al.	06/11/1928	78-0125 through -0136	Canal P/D's; 5/8"/acre, total acres, measuring devices
78B	Little Salmon River Spring Creek Lick Creek	Hawthorn vs. Ward and Moyer	01/29/1930	78-0137 through -0141	1"/acre; flow rate and ditch requirements, measuring devices
78B-1	Little Salmon River	Meyer vs. Berry et al.	01/09/1931	78-0142 through -0145	1"/acre < 7/1, 5/8"/acre > 7/1;
78B-2	Little Salmon River and Spring Creek	Dreyer vs. Mitchell et al.	01/25/1937	78-0146 through - 0154, 78-0271	7/8"/acre; measuring devices
78C	Goose Creek	Clay et al. vs. Clark et al.	07/13/1921 09/25/1922	78-0155 through -0254; 78-0257 through -0259	8/10"/acre, with exceptions; canal P/Ds; North and South Prong, Supplemental Decree
78D	Tamarack Creek	Dickey vs. Hardin	12/31/1931	78-0255 and 78-0256	Equal right to water when creek flow > .40 cfs
78E	Hat Creek	Aubin vs. Howard et al.	03/22/1929	78-0260 through -0262	Rotation requirements, rights to excess flows
78F	Three Mile Creek	Osborn vs. Smith et al.	11/29/1919	78-0263 through -0266; -0257?	2 nd copy of decree in has -0257 – unclear
78G	Martin Creek	Circle C Ranch vs. Anderson	10/11/1933	78-0267 through -0270	Cfs dependent-creek flow, future reservoir discussed

APPENDIX E

Outstanding Scenic Waterways (Class A Waterways)

Little Salmon River:

North of New Meadows valley to upstream of Hazard Creek

Halley Creek

Goose Creek Watershed

Goose Creek – Twin Lakes to Below Goose Lake
Unnamed west side tributary to Goose Lake
Brundage Creek: headwaters to Brundage Reservoir
Unnamed eastside tributary to Brundage Reservoir-
stream traversing Hartley Meadows

Hazard Creek Watershed

Hazard Creek: headwaters to Clayburn Creek,
including Upper Hazard and Hazard lakes
Big Hazard Lake Creek: headwaters to mouth
Vance Creek: headwaters
Clayburn Creek: headwaters
Lake Serene Creek: Lake Serene to mouth
Hyatt Creek: headwaters
Grassy Mountain Lakes
Hidden Lake
Bascum Canyon: headwaters
Unnamed tributary downstream of Jack Creek:
headwaters to mouth
Hard Creek: headwaters to Brown Creek, including
Hard Creek Lake
East Fork Corral Creek: headwaters to confluence with
Duck Lake outlet

Big Dave Creek: headwaters to mouth
Warm Springs Creek: headwaters
Black Lake Creek: headwaters to mouth
Jacks Creek: headwaters to mouth
Guard Creek: headwaters to mouth
Frog Lake
Duck Lake
Corral Lake

Boulder Creek Watershed

Star Creek: headwaters
Cold Springs Creek: headwaters
Squirrel Creek

Bull Horn Creek: headwaters
Pollock Creek: headwaters
Pony Creek: headwaters and tributary

Elk Creek Watershed

Elk Creek: headwaters, including Elk Lake and
unnamed perennial headwater tributaries
Little Elk Creek: headwaters to Buck Lake Creek
Buck Lake Creek: headwaters to mouth

Outstanding Scenic Waterways (Class A Waterways) - Continued

Rapid River Watershed

Rapid River: headwaters (including perennial headwater tributaries) to fish hatchery
Twin Lakes Creek: headwaters to mouth
North Star Creek: headwaters to mouth
Cabin Creek: headwaters to mouth
Lonesome Creek: headwaters to mouth
Trail Creek: headwaters to mouth
Louise Creek: headwaters to mouth
Hull Creek: headwaters to mouth
Cougar Creek: headwaters and lower end
Cora Gulch: headwaters to mouth
West Fork Rapid River: Idaho County line to mouth
Castle Creek: headwaters to mouth and perennial tributary
Lake Fork and all perennial tributaries, including
 Granite Fork: headwaters to mouth
 Rose Creek: headwaters to mouth
 Rock Creek: headwaters to mouth

Sinking Creek: headwaters to mouth
Cold Springs Creek: headwaters to mouth
Frying Pan Creek: headwaters to mouth
Paradise Creek: headwaters to mouth
Louse Creek: headwaters to mouth
Copper Creek: headwaters to mouth
Wyant Creek: lower end
Rattlesnake Creek: lower end
Dutch Oven Creek: lower end

Echols Creek: headwaters to mouth
Pactolian Gulch: headwaters to mouth

APPENDIX F

Amended Moratorium Order (for Salmon and Clearwater River Basins)

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATIONS FOR)
PERMITS FOR THE DIVERSION AND USE)
OF SURFACE WATER WITHIN THE SALMON)
AND CLEARWATER RIVER BASINS IN)
IDAHO)

AMENDED

MORATORIUM ORDER

The Director of the Department of water Resources, having responsibility for the administration of the appropriation of the water of the state of Idaho and the protection of rights to the use of water within the state, the protection of the public interest in the waters of the state, and the conservation of the water resources of the state, enters the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1. On May 15, 1992, the Director of the department issued a moratorium against the approval of certain new applications within the Salmon and Clearwater River basins. Conditions have now changed so that amendments to the moratorium order are now appropriate.

2. The Salmon and Clearwater River basins are free-flowing streams of the state, generally without obstructions from dams and impoundments and serve as habitat for anadromous salmon and steelhead fish.

3. The National Marine Fisheries Service (NMFS) has listed the Snake River sockeye, spring/summer and fall chinook salmon under provisions of the Endangered Species Act (ESA). That action has resulted in the need to take measures to facilitate the recovery of the salmon. Such measures include protection of the habitat conditions as well as modification of the operation of dams which imperil fish passage thorough the lower Snake and Columbia Rivers.

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4. Diversions of water from the Salmon and Clearwater Rivers and their tributaries have the potential of impacting the salmon and steelhead on their migration to the ocean and return to spawning areas in the river basins.

5. Actions are necessary in the public interest to control the appropriation of water from the Salmon and Clearwater Rivers and their tributaries to the extent practicable to prevent loss of anadromous fish. Such actions, however, will only be meaningful over the long-term if other interests in the region make meaningful efforts to remove or modify the down-river obstructions to fish passage caused by dams.

CONCLUSIONS OF LAW

1. The Director of the Department of Water Resources is authorized under the provisions of Section 42-1805(7), Idaho Code, as follows:

After notice, to suspend the issuance or further action on permits or applications as necessary to protect existing vested water rights or to ensure compliance with the provisions of chapter 2, title 42, Idaho Code, or to prevent violation of the minimum flow provisions of the state water plan.

2. The granting of new water right permits within the Salmon and Clearwater River basins could impact salmon and steelhead, which action would be contrary to the local public interest in such fish resources and would be inconsistent with the conservation of water resources within the state of Idaho which the Director is charged to protect under the provisions of Section 42-203A(5), Idaho Code.

ORDER

IT, IS, THEREFORE HEREBY ORDERED that the prior moratorium order of the department issued on May 15, 1992, is superceded by this Amended Moratorium Order.

IT IS FURTHER HEREBY ORDERED that a moratorium is established on the processing of applications for permits to appropriate surface water resources within the Salmon and Clearwater River

ORDER - Pg 2

basins subject to the following conditions:

1. This moratorium shall be in effect on and after its entry and shall remain in effect until withdrawn or modified by order of the Director. A future decision to continue or rescind the moratorium will consider all efforts being made within the region toward the recovery of salmon.

2. This moratorium applies to all applications, previously filed, or yet to be filed seeking permits to appropriate surface water within the drainage basins of the Salmon and Clearwater Rivers upstream from their mouths.

3. This permit does not affect the authorization to continue development of any existing approved application (permit).

4. This moratorium does not apply to any application for domestic purposes as such term is defined in Section 42-111, Idaho Code, nor to any application to use ground water.

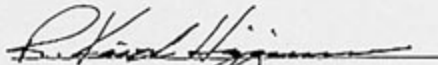
5. The moratorium does not apply to any application proposing a non-consumptive use of water.

6. This moratorium does not apply to applications for uses existing prior to the start of the Snake River Basin Adjudication in November 1987.

7. This moratorium does not prevent the Director from reviewing on a case by case basis an application which otherwise would not be approved under terms of this moratorium, if:

- a) Protection and furtherance of the public interest as determined by the Director requires consideration and approval of the application irrespective of the moratorium, or
- b) The Director determines that the use of the water pursuant to the application will have no effect on the migration of anadromous fish due to:
 - i) the location of use
 - ii) mitigation provided by the applicant to offset reduction in flow for fish migration, or
 - iii) insignificant consumption of water.

Dated this 30TH day of APRIL, 1993.


R. KEITH HIGGINSON, Director

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End

APPENDIX G

Estimated Values of Fishing, Livestock, Crops, Mining, and Timber Industries to the Little Salmon River Basin Economy

During formation of the Little Salmon River Basin Comprehensive State Water Plan, efforts to represent economic conditions in the basin were challenged by a lack of data. Consequently, information on specific activities, and coincidentally, those activities thought of as most important by some basin residents, could not be reported without further investigation and research. On the other hand, one activity that did have basin-specific peer-reviewed data was related to the salmon and steelhead fisheries. One important message to learn from the data is that the basin's economy is diversifying and growing. In the long run, growth of tourism and recreation sector jobs adds stability to the local economy.

Because the basin straddles portions of two rural counties, and is geographically isolated from other portions of Idaho, basin-specific information regarding current economic conditions is not readily available from public sources (state or federal). Most public information is on the county level (state or federal). Except for special cases where research studies have investigated individual sectors of the basin's economy (such as for salmon and steelhead fishing activities),

information about traditional industries such as livestock, crops, mining, and timber was not available. Previous basin plans have included measures of economic activity by sector, so an attempt was made to quantify traditional activity for the Little Salmon River basin by using information collected specifically for this purpose.

The methods used for estimating economic values for fishing, livestock, crops, mining, and timber industries for the Little Salmon River basin are presented in this appendix along with their estimated values to the basin. Similar to published state and federal data, the values computed are all market values. A problem with the data available for individual sectors was its lack of uniformity. Hence, sectors were calculated using different methods. In addition, data gaps may have led to underestimates or overestimates of some sectors. For both these reasons, the values are not strictly comparable across sectors. Instead, they may be interpreted as characterizing the sectors in very general terms. Table G-1 summarizes the estimated annual values for each sector.

Table G-1. Summary of annual economic values for fishing, livestock, crops, mining, and timber sectors to the Little Salmon River basin area. Values given are estimates and should be used only for general comparisons.

Economic Activity	Estimated Annual Value (Millions of Dollars)
Timber - potential value	3.6 to 4.8
Timber - actual sales	2.4 to 3.2
Livestock	1.6
Fishing	0.8 - 1.1*
Crops	0.65
Mining	0.6

* Reading 1996, 1999

Fishing

Studies have been conducted that directly or indirectly measure how much value is created by steelhead and salmon fishing in and surrounding the Little Salmon River basin. *All values presented below are given in 2001 dollars for purposes of comparison.* The studies can be organized into two groups, addressing somewhat different questions:

- The first group of studies, called *economic impact studies*, addresses the value of a fishing site to the participant and to the society as a whole. Three different studies were found that address the question of how much impact fishing activities have on the local economy. They measure the gross effect of a change in economic activity in an area, ignoring any compensating changes that may occur outside the region of interest.
- The second group of studies, called *economic valuation studies*, addresses the values not included in economic impact studies. Measuring values to the participant and society requires determining the “net willingness to pay” of a population for a site.¹ Values to participants and to society are not fully measured by market activity. For example, there is no daily fee for the use of streams for fishing or boating on the Little Salmon River. Hence, measuring “net willingness to pay” requires using non-market valuation techniques.²

¹ In general, these economic values are defined as the amount in excess of their actual expenditures that an average consumer is willing to pay to recreate at a site. This is usually referred to as their “net willingness to pay”. Net willingness to pay is the standard measure of value in Benefit Cost analysis performed by the Army Corp of Engineers, the Bureau of Reclamation and the Soil Conservation Service (U.S. Water Resources Council, 1979, 1983).

² Techniques such as travel cost method and contingent valuation were used to measure non-market values. U.S. Resources Council (U.S.

In 1999, Reading conducted an economic impact analysis of a restored salmon fishery in Idaho, focusing on regional communities from Lewiston to Stanley. Based on a survey of 637 anglers, who participated in a limited chinook season in 1997, he estimated a total of 8,693 fishing trips and 17,246 fishing days on the Little Salmon River in a season. A total of 14,714 trips and 29,190 days were estimated to occur in all regional river reaches included in the study. He further estimated an average of \$147 per day expended on trips to the Little Salmon River basin, \$44.70 of which was actually expended within the basin. This implies that \$2.5 million were expended directly on fishing trips to the Little Salmon River, \$0.8 million of which was expended within the basin. The full dollar impact of the spending within the Little Salmon River basin was not reported. However, the full impact on all regional river communities was \$8.7 million, and resulted in 262 fishing-recreation related jobs. The full impact includes indirect as well as direct effects of the spending. Indirect effects are “ripple” effects on all sectors of the local economies. Because the 1997 chinook season was short, the author felt that his study probably represented a low estimate of what a full season or more restored fishery could bring.

An economic impact analysis of steelhead fishing in Idaho in 1996 by Reading (1996) estimated the effects of the 1992-1993 steelhead season, focusing on the most impacted regional communities. An estimated 4,045 days were spent fishing in the Little Salmon River in a very short season. Direct expenditures by those fishing in the Little Salmon River are estimated at \$208 per day, 25 percent of which is assumed to have been expended locally. Overall impacts (including indirect effects) are not available in the river but are

Water Resources Council, 1979, 1983) and others recommend the travel cost method and the contingent valuation method as conceptually correct methods for empirically measuring net willingness to pay.

measured on a city basis. The direct impact of fishing on the Little Salmon River and on nearby reaches of the Salmon River to the city of Riggins is estimated at \$1.1 million, creating 25 jobs. The full impact of the activity to Riggins is \$2.0 million and the total increase in employment is 44 jobs. In comparison, employment in logging is 38 jobs. At first glance, it appears that jobs created from steelhead fishing are roughly comparable to the existing logging employment, and could be a substitute for logging. However, one steelhead job may not equal one logging job on a dollar for dollar basis, as explained on the next page:

- A study of neighboring Valley County by Guaderama et al. (2000) addresses directly the trade off between timber and recreation jobs. It analyzes the economic impact of a decline in timber and addresses the question of how many recreation activity days are required to compensate for the loss of timber jobs. The hypothetical loss of a sawmill results in a loss of 225 timber jobs. To compensate for this in terms of local expenditures, a doubling of recreational activity is required resulting in an increase of 90 percent in direct expenditures and a total of 927 new jobs. Hence, four recreation jobs are worth one sawmill job in terms of economic impact on a community.

While not strictly comparable, the results of the two studies appear to suggest different outcomes. Differences can partly be attributed to differences in the type of recreation experiences found in Valley and Idaho Counties. To compensate for a decrease in logging jobs, a large increase in recreational visitors would be required in Valley County. This is because of low levels of expenditures per visitor, caused partly by the large majority of day-trippers, and partly because some of the activities are low cost. For example, the average trip length for fishing in Valley County is less than a day and costs only \$13.60 per day. Contrast this with the Reading study, in which the average trip length is greater than a day, and

the expenditures are \$147 per day for salmon fishing. Finally, the large increase in direct expenditures required to compensate for the loss of a mill may be explained by the large proportion of *those* expenditures being made outside Valley County. A larger proportion of direct expenditures made for fishing in the Little Salmon Basin is made within the basin.

There are three types of economic valuation studies where values are estimated for participants and society. These values represent the different ways that people find fishing beneficial. Some enjoy the fishing experience. This is a user value. Others, who may never have the experience, may find the very existence of the fishing resource desirable. This benefit is called an existence value. Finally, people may wish to preserve the option to use the resource so that they may use it in the future. These are called option values. These various values are additive, that is, they may be added together to determine the total economic value.

One study estimated the user value of a day of steelhead fishing on the Little Salmon River in 1985 (Donnelly et al. 1985). According to this study, the average steelhead angler was prepared to pay an additional \$58.60 per day to continue to have the sites available. Taking Reading's estimate of number of fishing days in a season (4,045 days), and assuming similar fishing conditions today as in 1985, we estimate total user values for a season of steelhead fishing at these sites of \$0.2 million.

Similarly, a different study estimated per angler user values of salmon and steelhead fish runs in 1990 in the Pacific Northwest (Olson et al. 1990). According to this study, the average salmon angler was prepared to pay \$65.66 per day and the average steelhead angler \$61.63 per day. Taking Reading's estimate of the number of fishing days in a season for salmon (17,246 person days), and 4,046 person days for steelhead, and assuming similar fishing conditions

today as in 1990, we estimate a total economic user value for a season at these sites of \$1.34 million.

We can contrast the Olson and Donnelly studies with one by Sorg et al. (1985) who estimated per angler user values of \$88.85 for current (1985) conditions of all cold-water fishing at designated sites in Idaho, including the Little Salmon River. Total user value of the Little Salmon River fishery, using Reading's combined estimates of fishing days for salmon and steelhead (21,291), is \$1.79 million for a season.

Finally the study by Olson et al. estimated existence and option values for a doubling of salmon and steelhead runs in 1990 in the Pacific Northwest. According to Olson, 35 percent of regional households were not participants but expressed existence values of \$22.69 per household per year. Also, nine percent of regional households expressed a desire for the option of fishing sometime in the future with an option value of \$9.57 per household per year. Calculating values for Idaho households only would yield total annual existence values of \$4.29 million and total annual option values of \$0.4 million, for a total of \$4.69 million.

While user existence and option values are additive in theory, the studies producing these estimates have different goals. Hence, it would not be sensible to add these user and non-user values together. Instead, they shed light on the order of magnitude of the values involved when we include the values of non-users.

APPENDIX G – Continued.

Livestock Values for Little Salmon River Basin

QUESTION: What is the annual value of the livestock industry to the Little Salmon River basin economy?

BACKGROUND and ASSUMPTIONS: Numerous differences in the management and marketing of cattle in the basin required separating benefits generated and credited inside the basin from benefits generated inside but credited outside of the basin.¹ Cattle were separated into four groups for measurement of benefits (i.e., yearlings, cow-calf seasonal upper basin area, cow-calf seasonal lower basin area, and cow-calf year-around). Further description of methodology and assumptions is given below for each livestock group. Calculations are shown in Table G-2 at the end of this section.

Yearlings and most cow-calves are owned by producers residing outside the basin. Hence, the benefits accruing to the basin from yearlings and most cow-calves are primarily revenues accruing to landlords from grazing. Revenues from grazing filters through to the basin economy.² Revenues also accrue to the producer residing inside the basin with year-around cow-calf operations. To reflect these different benefits, two methods were used to estimate cattle values; the pasture lease rates for yearlings and seasonal cow-calf grazing (reflecting the costs to the producer associated with producing livestock), and gross output for year-around cow-calf operations (reflecting the revenues to the producer associated with livestock sales).³

Because state and federal grazing fees are substantially lower than fees on private lands, use of state and federal grazing fees as indicators of local pasture rental markets may under-represent the overall value of grazing to the basin. In some of the scenarios presented below, private pasture lease rates were used to calculate overall livestock values for the basin (and not state or federal fees).

CATTLE

A. Upper Basin Area (New Meadows)

Yearlings (seasonal)⁴ - This portion of the Little Salmon River basin is used as high-quality irrigated pasture and is rented to cattle owners on a daily gain basis. Yearlings are shipped out of basin at end of season.

- * Assume about 9,000 head of yearlings feed for 100 days and gain 2.0 lbs. per day.
- * Assume that value of gain is \$0.26 per lb.

¹ Benefits generated but credited outside the basin represent a "leakage," and are therefore of no direct monetary value to the local economy.

² Profits from operations based inside the basin accrue to the local basin, but are not measured here.

³ The gross output per cow figure comes from University of Idaho cow-calf enterprise budgets and can be viewed as an average figure across several budgets. Sources: Neil Rimby, Univ. of Idaho Extension Range Economist; Univ. of Idaho, 1998 Idaho Livestock Costs and Returns Estimate EBB-CC2-98 (Cow-Calf--200 Cow), and EBB-CC4-98 (Cow-Calf--500 Cow). IDWR selected a median gross output value (an average of the 200 and 500 cow budgets) for final calculations.

⁴ Yearling numbers, average daily gain, and value of gain estimated by local references. Sources: Dean Dryden-New Meadows/Pollock Area Rancher, and Tom Yankey, NRCS-District Conservationist, Weiser. Average-to-high values were used by IDWR.

(Upper Basin Area - continued)

Cow-calf (seasonal)¹ - Many of the cow-calf pairs that spend early to late summers on Boise Cascade land and USFS grazing allotments move onto private pastures late summer and fall, and are eventually shipped out of the basin. A smaller number remain in the basin year-around, but are accounted for in the Lower Basin Area (see B.).

- * Assume about 2,650 pair use summer pasture for three months at \$16 per month/pair, and 2,000 pair use fall pasture/crop aftermath for two months at \$12 per month/pair.
- * Cows and calves are shipped out of the basin. Calf crop revenues do not contribute to the local economy for this group. See Cow-calf (year-around), below.

B. Lower Basin Area (Pollock/Riggins)¹

Cow-calf (seasonal) - This portion of the basin is rangeland, with lower productivity but longer grazing seasons. Most of the livestock operations are cow-calf.

- * Assume about 2,000 pair use summer pasture for three months at \$16 per month/pair, and 2,000 pair use fall pasture for four months at \$12 per month/pair.

Cow-calf (year-around) - A portion of the cow-calf population remains in the basin after summer grazing season ends. These over wintering livestock are accounted for on an annual, gross revenue per cow basis. Calves sold contribute to the local economy and are factored into the gross revenue per cow.

- * Assume about 1,350 cows remain in the basin year-around.² These cow numbers have been subtracted from the number of seasonal cow-calf units described above in the upper basin area (to avoid double counting).
- * Assume gross revenue per cow (or gross output) per year, is \$371. This includes revenue from calves sold.³

HORSES

Basin Wide - Cow-calf values for New Meadows seasonal use were the basis used to estimate horse grazing values.⁴ About 200 hd. have grazing permits:¹

- * Assume about 200 head use summer pasture for three months at \$20 per month, and 200 head use fall pasture/crop aftermath for two months at \$16 per month.

¹ Sources: Refer to Table G-2.

² Sources: Dean Dryden-New Meadows/Pollock Area Rancher, and Tom Yankey, NRCS-District Conservationist, Weiser.

³ Source: Neil Rimby, Univ. of Idaho Extension Range Economist.

⁴ Source: Ken Crane-Idaho Dept. of Agriculture, Range Livestock Specialist.

SHEEP

Basin Wide - Using sheep numbers provided in Table 4 (Little Salmon River Basin CSWP), values were calculated based on private land grazing lease rates. The only major private sheep grazing occurs on Boise Cascade land, for which values are already accounted for in the cattle pasture estimates reported above.

- * There are 8,000 sheep with lambs, pastured 6 months.
- * There are 4,000 sheep with lambs, pastured 3.5 months.
- * There are 1,070 sheep with lambs, pastured 1 month.
- * Private land grazing fee per sheep head-month = \$3.20 ¹

RESULTS: The livestock industry contributes about \$1.4 million to the Little Salmon River basin economy annually.

¹ Because state and federal grazing fees are substantially lower than fees on private lands, use of state and federal grazing fees as indicators of local pasture rental markets may under-represent the overall value of grazing to the basin. In some of the scenarios presented below, private pasture lease rates were used to calculate overall livestock values for the basin (and not state or federal fees).

Table G-2. Values used for determining annual economic benefit of livestock to the Little Salmon River basin area. Values given are estimates and should be used only for general comparisons. Total Value is product of all figures, by row, and then summed in last column.

	Grazing Season ^{3.}			Daily Gain (lbs) ^{4.}	Value of Gain per Day ^{4.}	Lease Rate per Month per Head	Gross Revenue per Cow	Total Value
	# Head ^{3.}	Days	Months					
CATTLE								
A. Upper Basin Area								
Yearlings - Seasonal	9,000	100		2.0	\$0.26			\$468,000
Cow calf - Seasonal	2,650		3			\$16 ^{4.}		\$127,200
Cow calf - Seasonal	2,000		2			\$12 ^{4.}		\$48,000
B. Lower Basin Area								
Cow calf - Seasonal	2,000		3			\$16 ^{4.}		\$96,000
Cow calf - Seasonal	2,000		4			\$12 ^{4.}		\$96,000
Cow calf - Yr.-around	1,350						\$371 ^{1., 2.}	\$500,850
HORSES								
summer pasture	200		3			\$20 ^{5.}		\$12,000
fall pasture	200		2			\$16 ^{5.}		\$6,400
SHEEP								
July	1,070		1			\$3.20 ^{6.}		\$3,424
May-October	8,000		6			\$3.20 ^{6.}		\$153,600
July-mid October	4,000		3.5			\$3.20 ^{6.}		\$44,800
Total Value	^{7.}							\$1,556,274

Footnotes:

- ^{1.} Source: Neil Rimby, Univ. of Idaho Extension Range Economist.
- ^{2.} Source: Univ. of Idaho, 1998 Idaho Livestock Costs and Returns Estimate, EBB-CC2-98 (Cow-Calf--200 Cow) and EBB-CC4-98 (Cow-Calf--500 Cow). A median value was used for gross revenue.
- ^{3.} Livestock numbers and grazing seasons provided by numerous sources: Dean Dryden-New Meadows/Pollock Area Rancher; J. Kwader-Boise Cascade; L.Daly-BLM; L.Lake-Nez Perce NF; and P.Grindle-Payette NF. Refer to Table 4 for more details on grazing numbers and seasons.
- ^{4.} Source: Dean Dryden-New Meadows/Pollock Area Rancher, and Tom Yankey, NRCS-District Conservationist, Weiser. Rate of gain and value are considered average to good. Late season and crop aftermath grazing reflected in lower price. Rangeland lease rates on state and federal lands are typically lower, therefore this value is an over-estimate.
- ^{5.} Source: Ken Crane-Idaho Dept. of Agriculture.
- ^{6.} Based on private pasture lease rate (see p. 129).
- ^{7.} Columns are not additive.

Agricultural Crop Values for Little Salmon River Basin

QUESTION: What is the annual value of the agricultural crop industry to the Little Salmon River basin economy?

BACKGROUND and ASSUMPTIONS: Information from University of Idaho regional planning guides combined with local values were used to estimate the economic values of grain and hay crops in the basin. About 11,580 acres of "agricultural" lands (including pasture) were identified using GIS map information. From this total, acreages were calculated using percentages of area on which the major crops are produced in the basin, and are: grass/alfalfa mix hay (feeder alfalfa) (14%), oat hay (5%), and barley (1%). On average, pasture accounts for about 80% of the total "agricultural" acres (and is not included here but is reported in the livestock economic section of this appendix).

RESULTS: Grain crops, including hay, contribute about \$650,000 to the Little Salmon River basin economy annually. Revenue derived from pasture is not included here, but was accounted for in the livestock contribution estimates to the basin's economy.

Table G-3. Values used for determining annual economic benefit of crops and hay to the Little Salmon River basin area. Values given are estimates and should be used only for general comparisons. Total Value is product of all figures, by row, and then summed in last column.

Land Use	Total Area (acres) ^{1.}	Total Area Proportion (%) ^{2.}	Estimated Area (acres)	Unit Yield per Acre ^{2.}	Value per Unit (\$) ^{2., 4.}	Total Value
Agricultural Land	11,580	100				
Pasture		80	9,264			
Alfalfa feeder hay		14	1,621	4 tons	80	\$518,720
Oat hay		5	579	2 tons	70	\$81,060
Barley (feed)		1	116	62 cwt. ^{3.}	5	\$32,364
Total Value			11,580			\$632,144

Footnotes:

^{1.} Source: 1992-1993 Landsat TM images processed by IDWR, 1998. See Figure 6. Land surface cover map of the Little Salmon River basin.

^{2.} Source: Tom Yankey, NRCS-District Conservationist, Weiser.

^{3.} Onehundred weight (cwt.) per acre (100 lbs/ac).

^{4.} Sources: *Univ. of Idaho Coop. Exten. System reports ...*

- 1999 Southwestern Idaho Crop Costs and Returns Estimate - EBB2-FB-99 - Feed Barley

- 1999 " " " - EBB2-AH-99 - Alfalfa Hay

- 1999 " " " - EBB2-AE2-99 - Alfalfa Hay Establishment with Oats

- 2000-01 Planning Prices for Idaho Crops and Livestock (www.uidaho.edu/ag/agecon/AEES/AEES00_11.pdf, accessed 7-24-01).

Mining Values for Little Salmon River Basin

QUESTION: What is the annual value of the mining industry to the Little Salmon River basin economy?

BACKGROUND and ASSUMPTIONS: According to the Idaho Department of Lands (IDL), the state agency responsible for regulating mining activities in Idaho, the only significant mines in the Little Salmon River basin are basalt rock quarries.¹ Because specific details regarding each mining activity are not available, all values calculated were based on gross basalt volumes extracted on an average yearly basis (over the last three to five years), multiplied by a cost per unit for basalt. Differentiating between pit-run and crushed material was not possible in all cases, therefore all material was considered to be crushed for this analysis. This assumption over-estimates the overall cost of basalt rock because pit-run material does not include the cost of crushing (about 1/3 of the basalt mined is classified as "pit run" by IDL). Transportation or delivery charges for crushed basalt outside of the pit are not included.

RESULTS: The sale of mine products (basalt) contributes about \$600,000 annually to the Little Salmon River basin economy.

Table G-4. Values used for determining annual economic benefit of mining to the Little Salmon River basin area. Values given are estimates and should be used only for general comparisons.

Mine Type	Tons mined per year (x 1,000) ^{1.}	Crushed Unit Cost (\$/ton) ^{2.}	Estimated Overhead plus Profit (\$/ton) ^{3.}	Estimated Revenue (\$/ton)	Total Value (\$)
Private pits	58.3	\$4	\$1	\$5	\$291,500
State mineral leases	26.3	\$4	\$1	\$5	\$131,500
Other (state/federal projects)	36.6 ^{4.}	\$4	\$1	\$5	\$183,000
<i>Totals</i>	121.2				\$606,000

Footnotes:

^{1.} Source: Nancy Welbaum, Idaho Dept. of Lands (McCall).

^{2.} Cost is 2001 dollars. Source: Pete Parsley (Geologist - Nelson Construction Co., verbal comm., 9/6/01).

^{3.} Source: Joe Jordan (P.E., retired).

^{4.} Includes Hwy. 95 project at 30,000 tons/year for 10 years.

Timber Value for Little Salmon River Basin

QUESTION: What is the annual value of the timber industry to the Little Salmon River basin economy?

BACKGROUND: To answer the above question, two approaches are presented here to:

- 1) give readers a general idea about the **potential value** of timber in the Little Salmon River basin (in otherwords, a supply-side view only, with no guarentees that timber will be harvested) and;
- 2) document actual **timber sales** that have occurred in the basin in the last three years and report their sale value (stumpage). This information provides the reader with a general idea of historical logging activity and indicates a trend and possible forecast of economic levels attributable to the timber industry in the Little Salmon River basin.

Abbreviations/Definitions

1 mbf = 1,000 board feet (bd. ft.)
mixed conifer = ponderosa pine, Douglas fir, western larch
whitewoods = subalpine fir, grand fir, Englemann spruce, and lodgepole pine
BLM = Bureau of Land Management
IDL = Idaho Dept. of Lands
NF = National Forest
USFS = US Forest Service

1) Potential Value of Timber

The potential value was estimated using the suitable harvest area multiplied by the annual sustainable harvest per acre and a low to high range of prices for timber sold in the last year (stumpage values). This value does not include the cost of other goods and services necessary to harvest and transport the logs. Recent sawmill closures in nearby Cascade and Emmett have depressed stumpage values by as much as \$50/mbf for the New Meadows area (pers. comm., Rod Brevig-Idaho Tax Commission, 8/20/01). Because stumpage prices and other factors may cause a wide range of variability in potential values, a range of values were estimated (see Assumptions).

Assumptions

Stumpage price range (from Boise Cascade and IDL estimates, 6/99 to 6/01).a., b.
mixed conifers stumpage = from \$150 to \$200/mbf
whitewoods stumpage = from \$100 to \$150/mbf

RESULTS: The annual value of Little Salmon River basin timber ranges from about \$3.6 million to \$4.8 million. Refer to Table G-5 for details.

Table G-5. Potential value of Little Salmon River basin timber on annual basis (acres and values rounded). Values were calculated by multiplying the Suitable Harvest Area by the Annual Sustainable Harvest, and then multiplied by each stumpage value (Low or High). Total values are the sums of the last two columns.

Land Ownership	Total Area (ac.) ^{1.}	Suitable Harvest Area (ac.) ^{2.}	Annual Sustainable Harvest (bd.ft./ac.) ^{3.}	Stumpage Value per mbf ^{4.}		Low Value	High Value
				Low	High		
Boise Cascade	48,000 ^{a.}						
- mixed conifer		45,000 ^{a.}	156 ^{a.}	\$150	\$200	\$1,053,000	\$1,404,000
Other Private	66,350 ^{c.}						
- forested	22,700 ^{c.}	17,025 ^{5.}	156 ^{a.}	\$150	\$200	\$398,000	\$531,000
State of Idaho	13,410 ^{c.}						
- mixed conifer		7,500 ^{b.}	152 ^{b.}	\$150	\$200	\$171,000	\$228,000
- whitewoods		3,500 ^{b.}	152 ^{b.}	\$100	\$150	\$53,000	\$80,000
BLM	16,170 ^{c.}						
- suitable		15,360 ^{6.}	156 ^{d.}	\$150	\$200	\$359,000	\$479,000
Nez Perce NF	38,116 ^{e.}						
- suitable		25,924 ^{7.}	180 ^{g.}	\$150	\$200	\$700,000	\$933,000
Payette NF	180,400 ^{c.}						
- mixed conifer		28,875 ^{f.}	155 ^{f.}	\$150	\$200	\$671,000	\$895,000
- whitewoods		12,375 ^{f.}	155 ^{f.}	\$100	\$150	\$192,000	\$288,000
Totals		155,559				\$3,597,000	\$4,838,000

Footnotes:

- ^{1.} All land in Little Salmon River basin.
- ^{2.} All harvest suitable timberland (excludes wilderness areas; includes roadless). Approximate acres.
- ^{3.} Average annual growth production on a sustainable basis.
- ^{4.} Price of timber before harvest. See Assumptions above.
- ^{5.} Acreage estimated by IDWR as 75% of total forested area. ^{a., c.}
- ^{6.} Acreage estimated by IDWR as 95% of total area. ^{a.}
- ^{7.} No timber sales are anticipated at this time. ^{g.}

Information Sources:

- ^{a.} Boise Cascade - John Kwader
- ^{b.} Idaho Dept. of Lands - McCall Region - Sheldon Keafer
- ^{c.} Idaho Dept. of Water Resources - GIS coverages for Little Salmon CSWP
- ^{d.} BLM - Cottonwood Field Office - Mark Craig
- ^{e.} USFS - Nez Perce N.F. - Mike McGee
- ^{f.} USFS - Payette N.F. - Ted Demetriades

2) Timber Sales

The following table describes Little Salmon River basin timber sales for the last three years. For some land ownerships, only average volumes and estimated stumpage values are available. To account for inflation, dollar values are adjusted to Year 2001 based on the Consumer Price Index (CPI).

RESULTS: The annual value of Little Salmon River basin timber sales ranges from about \$2.4 million to \$3.2 million. Refer to Table G-6 for details.

Table G-6. Value of timber sales for last three years, in the Little Salmon River basin in YR2001 dollars. Some values estimated ^a.

Land Ownership	Year	Sale Name	Total Volume (mbf)	Actual or Estimated Sale Price per mbf	CPI Adjustment Factor ¹	Sale Price per mbf in 2001 Dollars	Total Sale Value ²	Average Value ²	Average Value by Year		
									1999	2000	2001
Boise Cascade ^b	1999	Average of all Boise Cascade sales over last 3 yrs.	6,800	\$200 ^a	95.60	\$209	\$1,422,594	\$1,231,803	\$1,422,594	\$1,252,815	\$1,020,000
	2000		6,800	\$180 ^a	97.70	\$184	\$1,252,815				
	2001		6,800	\$150	100.00	\$150	\$1,020,000				
Other Private ^a	1999	<i>estimated</i> ^a	4,000	\$200	95.60	\$209	\$836,820	\$724,590	\$836,820	\$736,950	\$600,000
	2000		4,000	\$180	97.70	\$184	\$736,950				
	2001		4,000	\$150	100.00	\$150	\$600,000				
State of Idaho ^c	2000	Indian Mountain	3,235	\$171	97.70	\$175	\$566,208	\$566,208	---	\$566,208	---
BLM ^d	1999		0	\$0	95.60	\$0	\$0	\$37,271	\$0	\$14,509	\$0
	2000	Hwy. 95 R/W	63	\$225	97.70	\$230	\$14,509				
	2000	Denny Crk. Salvage	503	\$189	97.70	\$193	\$97,305				
	2001		0	\$0	100.00	\$0	\$0				
Nez Perce NF ^e		none							---	---	---
Payette NF ^f	1999	Brown's Creek	2,400	\$52	95.60	\$54	\$130,544	\$598,999	\$130,544	\$541,453	\$1,125,000
	2000	Second Chance (Goose II)	4,600	\$115	97.70	\$118	\$541,453				
	2001	Bare Rock (Goose Crk.) Sept. sale	7,500	\$150	100.00	\$150	\$1,125,000				
Total							\$8,344,198		\$2,389,958	\$3,209,240	\$2,745,000

Footnotes:

¹. Consumer Price Index adjustment.

². Values in 2001 dollars.

Information Sources:

- ^a. Idaho Dept. of Lands, McCall - John Lillehaug
- ^b. Boise Cascade - John Kwader
- ^c. Idaho Dept. of Lands, McCall - Sheldon Keafer

- ^d. USDI - BLM, Cottonwood - Jerry Haaland
- ^e. USFS - Nez Perce N.F. - Mike McGee
- ^f. USFS - Payette N.F. - Ted Demetriades